in smooth crossing of the lesion and optimal protection position along the artery.
Thirty four (n=34) patients with a mean age of 70 years were enrolled. 6 patients were symptomatic and 28 were asymptomatic. The lesions treated (n=34) had an average stenosis of 83% and residual stenosis post CAS of 4%. There were no exclusion criteria based on lesion morphology or complexity. Despite complex anatomies device and angiographic success were achieved in all cases (100%), and the GARDEX performance was highly rated by multiple users.
Conclusions: Early clinical experience suggests that the use of the GARDEX EPD in CAS is simple, easy and shows high successful rates even in challenging anatomies. The ability to cross the lesion over the guide wire of choice and then deploy the filter in place creates a unique, natural and appealing advantage for all indications. Clinical outcomes appear to be favorable and the role of this new device in CAS needs to be further confirmed in a larger patient population.

TCT-205

Transluminal Laser Revascularization Of Cerebral Blood Vessels In The Treatment Of Ischemic Stroke

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Background: The study of the effectiveness of transluminal laser revascularization of the brain in the treatment of ischemic stroke.
Materials and Methods: 424 patients aged 29-79 (average 67) with ischemic stroke, 278 (65.57%) men and 146 (34.43%) women. All the patients underwent CT, MRI of the brain, scintigraphy (SG), rheoencephalography (REG), MUGA. Lesion of intracranial type was diagnosed among 189 (44.58%) patients. 181 (95.76%) patients were operated on: 17 (9.39%) patients in the early period of 3-30 days after the stroke (Group 1); 51 (28.18%) patients in the delayed period of 1-6 months after the stroke (Group 2); 113 (62.43%) patients in the later periodof 6-72 months (Group 3).
High-energy pulsed laser systems were used for revascularization of main intracranial arteries; continuous low-energy laser systems were used for revascularization of distal intracranial branches.
Result: A good immediate angiographic result manifested in the restoration of patency and lumen of affected vessels as well as in collateral revascularization was achieved in 174 (96.13%) cases.
In the first year after the treatment the results depended on the size of ischemic focus and timing of surgical intervention. Good clinical results (almost complete recovery of intellectual ability and motor function) were obtained in Group 1 in 7 (41.18%), in Group 2 in 20 (39.22%), and in Group 3 in 27 (23.89%) cases. Satisfactory clinical results (incomplete recovery of intellectual abilities and motor function) in Group 1 were obtained in 6 (35.29%), in Group 2 in 14 (27.45%), and in Group 3 in 24 (21.24%) cases. Relatively satisfactory clinical results (partial recovery of intellectual ability and motor function) were obtained in Group 1 in 4 (23.53%), in Group 2 in 17 (33.33%), in Group 3 in 62 (54.87%) cases. There was no negative effect observed after any surgical intervention.
Conclusion: Evaluating the data obtained, we can conclude that the method of transluminal laser revascularization of cerebral blood vessels is an effective method for treating effects of ischemic stroke.

TCT-206

Long-term Results Of Brain Transluminal Laser Revascularization In The Treatment Of Ischemic Stroke

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Background: The study of long-term results (2-10 years) of brain transluminal laser revascularization in the treatment of ischemic stroke.
Methods: The study involved 181 patients aged 42-81 (average 70) with ischemic stroke who underwent treatment with brain transluminal laser revascularization at various times after the disease development. All patients underwent CT, MRI, scintigraphy (SG), rheoencephalography (REG); 36 (19.89%) patients underwent MUGA of the brain. Postoperative CT or MRI of the brain were performed in 6-12 months and then each year, REG and SG were performed at intervals of 1-12 months and then each year. Repeated angiographic examinations in the late postoperative period were carried out in 2-10 years.
Results: According to CT and MRI in the first year after the surgical treatment, reducing of the size of postischemic cyst was noted in 154 (85.08%) cases. In the late postoperative period further tendency of postischemic cyst reduction persisted in 140 (77.35%) cases. According to SG and REG in the postoperative period of more than 2 years, improvement of cerebral blood velocity and pulse blood filling in cerebral hemispheres was observed in 82 (45.30%) cases, recovery in 99 (54.70%) cases. According to MUGA of the brain, maintaining of angiographic pattern obtained after the operation was detected in 15 (41.67%) cases; further progression of collateral revascularization was found among 21 (58.33%) patients operated on. Further progression of atherosclerosis in other parts of the vascular bed of the brain was detected among 11 (30.56%) examined patients.
Clinically, the results depended on the size of focal ischemic stroke and timing of surgery after the disease development. In the long-term period (2-10 years) after transluminal laser revascularization almost complete recovery of intellectual ability and motor function persisted in 53 (29.28%) cases; incomplete recovery was preserved in 43 (23.76%) cases; partial recovery persisted in 85 (46.96%) cases.
Conclusion: The achieved results prove that after brain transluminal laser revascularization on patients with ischemic stroke there develop a stable positive trend which makes it possible to significantly improve and even restore their quality of life.

Chronic Total Occlusions

(Abstract Nos 207-220)

TCT-207

Comparison of Everolimus-Eluting Stent with Paclitaxel-Eluting Stent in Long Chronic Total Occlusion

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Purpose: Randomized studies comparing paclitaxel-eluting stent (PES) [TAXUS, Boston Scientific, Natick, MA] with everolimus-eluting stent (EES) [XIENCE V, Abbott Vascular, Santa Clara, CA] have shown the superiority of the latter in terms of efficacy and safety. There are no data comparing these 2 types of stent in long chronic total occlusion (CTO) treated with > 40 mm of stents. The aim of this study is the comparison of the 2 types of stents in long CTO.
Methods: From the Florence CTO-PCI prospective registry, in a period from 2005 to September 2009, 556 patients underwent PCI for CTO (> 3 months). CTO stenting requiring > 40 mm in length stents in native coronary vessel was performed in 212 pts: 135 with PES and 77 with EES. All eligible pts were scheduled for a 6-9 month angiographic F-U. Logistic regression analysis was used to evaluate independent predictors of restenosis or reocclusion.
Results:. Baseline clinical and angiographic characteristics between PES and EES groups: mean age 68 ± 11 vs 67 ± 10 yrs; diabetes 27% vs 29%; previous myocardial infarction 57% vs 62%; 3-vessel disease 53% vs 52%; ejection fraction 43% ± 13% vs 47% ± 12% (p<.05); CTO left anterior descending artery 29% vs 32.5%; mean stent length 71 ± 23 vs 76 ± 27mm; multivessel PCI 65% vs 67%. No procedural death occurred.
The angiographic F-U (follow-up rate 85%) has shown a significant lower restenosis or reocclusion rate in EES group compared to PES group: 14.3% vs 33% (p=.010). The patency rate was also higher in EES group: 96.4% vs 84.4% p=.022). At multivariable analysis EES was related to a decreased risk of restenosis or reocclusion rate (OR 0.34; 95%CI 0.14-0.79; p=.015). At the clinical follow-up (F-U 100%; median F-U 250 days), definite or probable stent thrombosis rate was 3.7% in PES group and 0% in EES group (p=.087), the composite of cardiac death or nonfatal myocardial infarction was 6% vs 1.3%, while PCI target vessel revascularization (TVR) was 21.5% vs 9% (p=.041). No coronary surgery revascularization occurred in both groups.
Conclusions: The results of the study confirm the superior efficacy and safety of EES also in subset of patients with long CTO who are at the highest risk of target vessel failure. The higher CTO patency rate might provide a benefit also in term of long-term survival and major adverse cardiac events.

TCT-208

Angiographic and Clinical Outcomes of Retrograde Recanalization for Chronic Total Occlusions

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Background: The retrograde approach is one of the promising of percutaneous coronary intevention (PCI) for chronic total occlusion (CTO) lesions. However, mid-term angiographic and clinical outcomes after successful retrograde PCI for CTO lesions remain unknown.
Methods: We enrolled 203 consecutive patients with 211 lesions who underwent retrograde PCI for CTO lesions between October 2005 and July 2009. The lesions were divided into two groups: one was treated with the controlled antegrade and retrograde subintimal tracking (CART) technique which created a subintimal dissection and the other was without the CART technique. The angiographic and clinical outcomes at 8 months were compared between them. Major adverse cardiac events (MACE) are composed of death, myocardial infarction (MI), and target lesion revascularization (TLR). The definition of coronary artery aneurysm (CAA) is a luminal diameter which is 1.5 times larger than the adjacent reference diameter.
Results: The CART or reverse CART techniques were perfomed in 19.0% (40 of 211 lesions). Drug-eluting stents were used in 96.7% (204 of 211 lesions). There were no significant differences in stent diameter, stent length, number of stents, and overlap stenting between two groups. MI in hospital occurred in 1 patient of the control group. The angiographic follow-up rate was 76.4% (155 of 203 patients). There were no significant differences in MACE up to the mid-term follow-up (27.5% vs 19.0%, p=0.24). There was no late stent thrombosis. The prevalences of late CAA and stent fracture were higher in the CART group than the control (Table).

Angiographic outcome of lesions treated with retrograde approach

	CART group	Control group	p-value
	N=29	N=130	
Number of stents	3.2±1.1	2.9±1.2	0.15
Coronary artery aneurysm	24.1% (7)	3.8% (5)	<0.01
Stent fracture	34.5% (10)	16.2% (21)	0.04
Binary restenosis rate	37.9% (11)	25.4% (33)	0.18
TLR	34.5% (10)	20.8% (27)	0.14

Conclusion: Stent implantation at sites of subintimal dissection is significantly related to late coronary aneurysm and stent fracture but not much to the mid-term clinical outcomes. Further long-term angiographic follow-up is needed for better understanding.

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